

Environmental Profile

This LCA is calculated according to: ISO 14044, ISO 14040 and EN 15804

Ecochain v3.5.64



Product: 3074247 - SafeTech RCn PotW Pp 90x5.4 L=6 BC
Unit: 1 piece
Manufacturer: Wavin - DE - Westeregeln - verified
Address: Borrweg 10
39448 Börde-Hakel
Germany
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LCA standard: EN15804+A2 (2019)
Standard database: Worldwide - Ecoinvent v 3.6 Cut-Off
Externally verified: Yes
Issue date: 11-08-2022
End of validity: 11-08-2027
Verifier: Martijn van Hövell - SGS Search



Wavin SafeTech RC n is a co-extruded PE-100 RC two-layer pipe with protective properties according to PAS 1075. The outer signal layer is about 10% of the standard wall thickness and is colored according to the medium - blue for drinking water, orange for gas and green for waste water.

This LCA was evaluated according to EN15804+A2. It was concluded that the LCA complies with this standard.

The LCA background information and project dossier have been registered in the online Ecochain application in the account Wavin - DE - Westeregeln - verified (2020). (☑ = module declared, MND = module not declared).

A1	A2	A3	A4	A5	B1	B2	B3	B4	B5	B6	B7	C1	C2	C3	C4	D
☑	☑	☑	MND	MND	MND	MND	MND	MND	MND	MND	MND	MND	☑	☑	☑	☑
Product stage					Use stage							End-of-Life stage				
A1 Raw material supply A2 Transport A3 Manufacturing					B1 Use B2 Maintenance B3 Repair B4 Replacement B5 Refurbishment B6 Operational energy use B7 Operational water use							C1 De-construction demolition C2 Transport C3 Waste processing C4 Disposal				
Construction process stage					Benefits and loads beyond the system boundaries											
A4 Transport gate to site A5 Assembly / Construction installation process					D Reuse- Recovery- Recycling- potential											

Environmental impacts and parameters

GWP-total = EF Climate Change [kg CO2 eq]; **GWP-f** = EF Climate change - Fossil [kg CO2 eq]; **GWP-b** = EF Climate Change - Biogenic [kg CO2 eq]; **GWP-luluc** = EF Climate Change - Land use and LU change [kg CO2 eq]; **ODP** = EF Ozone depletion [kg CFC11 eq]; **AP** = EF Acidification [mol H+ eq]; **EP-fw** = EF Eutrophication, freshwater [kg P eq]; **EP-m** = EF Eutrophication, marine [kg N eq]; **EP-T** = EF Eutrophication, terrestrial [mol N eq]; **POCP** = EF Photochemical ozone formation [kg NMVOC eq]; **ADP-mm** = EF Resource use, minerals and metals [kg Sb eq]; **ADP-f** = EF Resource use, fossils [MJ]; **WDP** = EF Water use [m3 depriv.]; **PM** = EF Particulate matter [disease inc.]; **IR** = EF Ionising radiation [kBq U-235 eq]; **ETP-fw** = EF Ecotoxicity, freshwater [CTUe]; **HTP-c** = EF Human toxicity, cancer [CTUh]; **HTP-nc** = EF Human toxicity, non-cancer [CTUh]; **SQP** = EF Land use [Pt]; **PERE** = Use of renewable primary energy excluding renewable primary energy resources used as raw materials [MJ]; **PERM** = Use of renewable primary energy resources used as raw materials [MJ]; **PERT** = Total use of renewable primary energy resources [MJ]; **PENRE** = Use of non-renewable primary energy excluding non-renewable primary energy resources used as raw materials [MJ]; **PENRM** = Use of non-renewable primary energy resources used as raw materials [MJ]; **PENRT** = Total use of non-renewable primary energy resources [MJ]; **PET** = Total energy [MJ]; **SM** = Use of secondary material [kg]; **RSF** = Use of renewable secondary fuels [MJ]; **NRSF** = Use of non-renewable secondary fuels [MJ]; **FW** = Use of net fresh water [m3]; **HWD** = Hazardous waste disposed [kg]; **NHWD** = Non-hazardous waste disposed [kg]; **RWD** = Radioactive waste disposed [kg]; **CRU** = Components for re-use [kg]; **MFR** = Materials for recycling [kg]; **MER** = Materials for energy recovery [kg]; **EE** = Exported energy [MJ]; **EET** = Exported energy thermic [MJ]; **EEE** = Exported energy electric [MJ]

Statement of Confidentiality

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Results

Environmental impact	Unit	A1	A2	A3	A1-A3	C2	C3	C4	D	Total
GWP-total	kg CO2 eq	1.78E+1	8.32E-1	3.23E-1	1.89E+1	2.32E-1	7.57E+0	1.29E-1	-1.17E+1	1.52E+1
GWP-f	kg CO2 eq	1.77E+1	8.31E-1	2.69E-1	1.88E+1	2.32E-1	7.57E+0	1.29E-1	-1.16E+1	1.51E+1
GWP-b	kg CO2 eq	8.58E-2	3.49E-4	2.52E-2	1.11E-1	1.41E-4	-8.28E-3	9.66E-5	-4.40E-2	5.93E-2
GWP-luluc	kg CO2 eq	5.36E-3	3.17E-4	2.81E-2	3.38E-2	8.22E-5	1.31E-3	1.85E-6	-2.64E-3	3.26E-2
ODP	kg CFC11 eq	9.15E-7	1.83E-7	3.75E-8	1.13E-6	5.35E-8	1.70E-7	2.75E-9	-5.57E-7	8.04E-7
AP	mol H+ eq	6.61E-2	6.17E-3	1.55E-3	7.38E-2	1.32E-3	7.14E-3	6.55E-5	-3.22E-2	5.02E-2
EP-fw	kg P eq	2.95E-4	8.07E-6	6.00E-6	3.09E-4	1.91E-6	3.76E-5	8.50E-8	-1.45E-4	2.04E-4
EP-m	kg N eq	1.11E-2	2.01E-3	3.38E-4	1.34E-2	4.73E-4	2.08E-3	4.63E-5	-5.88E-3	1.01E-2
EP-T	mol N eq	1.23E-1	2.21E-2	3.36E-3	1.49E-1	5.22E-3	2.29E-2	2.66E-4	-6.54E-2	1.12E-1
POCP	kg NMVOC eq	5.88E-2	6.20E-3	9.68E-4	6.60E-2	1.49E-3	7.23E-3	1.04E-4	-3.05E-2	4.43E-2
ADP-mm	kg Sb eq	1.72E-4	2.01E-5	7.21E-6	1.99E-4	6.01E-6	2.82E-5	6.57E-8	-7.50E-5	1.59E-4
ADP-f	MJ	6.25E+2	1.24E+1	3.22E+0	6.40E+2	3.57E+0	2.26E+1	2.00E-1	-3.48E+2	3.18E+2
WDP	m3 depriv.	1.36E+1	4.30E-2	1.65E+0	1.53E+1	1.09E-2	4.45E-1	9.18E-4	-6.77E+0	9.00E+0
PM	disease inc.	6.19E-7	7.17E-8	1.47E-8	7.05E-7	2.10E-8	1.17E-7	1.38E-9	-2.54E-7	5.91E-7
IR	kBq U-235 eq	5.27E-1	5.21E-2	9.24E-3	5.89E-1	1.56E-2	6.82E-2	9.34E-4	-2.10E-1	4.63E-1
ETP-fw	CTUe	1.14E+2	1.09E+1	7.39E+0	1.32E+2	2.90E+0	2.57E+1	1.77E-1	-5.06E+1	1.10E+2
HTP-c	CTUh	4.70E-9	3.67E-10	2.73E-10	5.34E-9	1.03E-10	3.05E-9	4.87E-12	-2.41E-9	6.09E-9
HTP-nc	CTUh	1.11E-7	1.18E-8	6.89E-9	1.30E-7	3.45E-9	3.85E-8	1.12E-10	-5.38E-8	1.18E-7
SQP	Pt	2.39E+1	1.03E+1	3.34E-1	3.45E+1	3.05E+0	1.81E+1	5.14E-1	-1.11E+1	4.51E+1
Resource use	Unit	A1	A2	A3	A1-A3	C2	C3	C4	D	Total
PERE	MJ	1.02E+1	1.52E-1	1.52E+1	2.55E+1	5.12E-2	1.12E+0	7.93E-3	-5.04E+0	2.16E+1
PERM	MJ	0	0	0	0	0	0	0	0	0
PERT	MJ	1.02E+1	1.52E-1	1.52E+1	2.55E+1	5.12E-2	1.12E+0	7.93E-3	-5.04E+0	2.16E+1
PENRE	MJ	6.70E+2	1.32E+1	3.44E+0	6.87E+2	3.79E+0	2.41E+1	2.13E-1	-3.76E+2	3.39E+2
PENRM	MJ	0	0	0	0	0	0	0	0	0
PENRT	MJ	6.70E+2	1.32E+1	3.44E+0	6.87E+2	3.79E+0	2.41E+1	2.13E-1	-3.76E+2	3.39E+2
PET	MJ	6.80E+2	1.33E+1	1.86E+1	7.12E+2	3.84E+0	2.52E+1	2.21E-1	-3.81E+2	3.61E+2
SM	kg	0	0	0	0	0	0	0	0	0
RSF	MJ	0	0	0	0	0	0	0	0	0
NRSF	MJ	0	0	0	0	0	0	0	0	0
FW	m3	2.07E-1	1.47E-3	3.92E-2	2.48E-1	4.03E-4	1.31E-2	2.48E-4	-1.03E-1	1.58E-1

Output flows and waste categories	Unit	A1	A2	A3	A1-A3	C2	C3	C4	D	Total
HWD	kg	8.45E-5	3.04E-5	5.66E-6	1.21E-4	9.12E-6	3.69E-5	2.41E-7	-1.02E-4	6.44E-5
NHWD	kg	5.84E-1	7.49E-1	7.01E-3	1.34E+0	2.21E-1	1.11E+0	8.83E-1	-2.84E-1	3.27E+0
RWD	kg	5.65E-4	8.18E-5	1.35E-5	6.61E-4	2.42E-5	8.64E-5	1.31E-6	-1.95E-4	5.78E-4
CRU	kg	0	0	0	0	0	0	0	0	0
MFR	kg	0	0	0	0	0	0	0	0	0
MER	kg	0	0	0	0	0	0	0	0	0
EE	MJ	0	0	0	0	0	0	0	0	0
EET	MJ	0	0	0	0	0	0	0	0	0
EEE	MJ	0	0	0	0	0	0	0	0	0



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